



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D5425-043
Job Sheet 188012



Part No: D5425-043

Job Qty: 1 ea

Part Name: Float Skidtube Assembly



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 12/31/18

Job Tracking No:

Due Date: 2/20/19

Created By: Jesse White

Type: Stock

Description:

Note: DWG D5425 REV.B IPP REV:A 17.11.02 NEW ISSUE DD VERF:JFS IPP REV:B 18.08.20 AS PER DWG
REV.B DD VERF:DP

Ship Via:

Bill of Materials



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S142725



Part: D5425-043

Job No: 188012

Serial No/Batch: S142725

Revision: 8

Inspector:

Exp Date:

Instructions: Various STC's

Date: 01/08/19

SCRAP

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042) <i>INSP 12</i> <i>UP 12/1/26</i>	
Description Work Order Deviation		Disposition		Completed By	
<i>Fuel end is over bent @ 7.5 (+0.26) high.</i>		<i>Acceptable. Slight increase in drag moment, however smallest margin is 6.12.</i>		<i>UP 12/1/26</i>	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
		Other/Details:			

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea		2/20/19	0.00	0.00	Start Up Skid tubes-2		DD
110	Skid tubes	1 pcs		2/20/19	0.00	8.24	Skid tubes-3		DD
120	CNC Vertical Machining	1 pcs		2/20/19	0.00	22.77	HAAS1-4		MM
130	QC	1 pcs		2/20/19	0.00	0.00	QC2 Machining-4		MM
140	QC	1 pcs		2/20/19	0.00	0.00	QC8 Machining-4		MM
150	HandFinish	1 pcs		2/20/19	0.00	0.24	HandFinish1		DR 19/01/21
160	QC	1 pcs		2/20/19	0.00	0.00	QC7-5		DR 19/01/22
170	CNC Bend Skid tubes	1 pcs		2/20/19	0.00	2.63	CNC Bend Skid tube		
180	QC	1 pcs		2/20/19	0.00	0.00	QC5		
190	Skid tubes	1 pcs		2/20/19	0.00	8.24	Skid tubes-3		
200	QC	1 pcs		2/20/19	0.00	0.00	QC5		
210	HandFinish	1 pcs		2/20/19	0.00	0.24	HandFinish6		
220	QC	1 pcs		2/20/19	0.00	0.00	QC7-5		
230	Skid tubes	1 pcs		2/20/19	0.00	8.24	Skid tubes-3		
240	QC	1 pcs		2/20/19	0.00	0.00	QC5		
250	HandFinish	1 pcs		2/20/19	0.00	0.24	HandFinish6		
260	QC	1 pcs		2/20/19	0.00	0.00	QC7-5		
270	SprayPaint	1 pcs		2/20/19	0.00	0.00	Spray Paint		
280	QC	1 pcs		2/20/19	0.00	0.00	QC14		
290	HandFinish	1 pcs		2/20/19	0.00	0.24	HandFinish4		
300	QC	1 pcs		2/20/19	0.00	0.00	QC5		
310	Packaging	1 pcs		2/20/19	0.00	0.00	Packaging3-2		
320	QC21-SA	1 Ea		2/20/19	0.00	0.00	QC21		

Part Op 110 - 1-Cut tube to finished length as per Dwg. 2-Deburr ends as per Dwg.

Descriptions: 120 - 1-Machine as per Dwg. and Folio FB536 DWG REV: B FOLIO REV: AA 2-Deburr as per Dwg.

150 - 1-Scrub inside of tube with medium scotchbright.

170 - 1-Bend Aft end of tube as per Dwg. and Folio 33. Insert Bending mandrel DT 10328 at 20.0" from aft end. Use buggy A,B,C. to stabilize tube. HEIGHT 4.375 2-Bend Forward end of tube as per Dwg. and Folio 33. Insert Bending mandrel DT 10328 at 12.0" from fwd end. Use buggy A,B,C To stabilize tube. HEIGHT 7.500 3-Record dimensions on work order.

180 - #NAME?

190 - 1-Drill remaining holes of DETAIL M, N, P. USING DT10340 A,B,C,D 2-Open holes to finished size as per Dwg. 3-Deburr holes per QSI002 section 4.2.3 and blow out all chips from inside of tube.

230 - 1-Wet install crossbolt spacers of Section G-G. Swage to 0.437 as per Dwg. PRIMER B Start Time: Finish Time: ***CURE TIME 6HRS. BEFORE PROCEEDING TO NEXT STEP*** 2-Swage crossbolt spacers of Section F-F to 0.313 as per Dwg. 3-Trim / Grind flush, deburr. 4-Identify per QSI 044 6.1

250 - ***DO NOT SUBMERGE TUBE IN DEOXIDIZER***

270 - ***PLUG ALL CROSSBOLT SPACER HOLES PRIOR TO PRIME AND PAINT*** 1-PRIME AS PER DWG AND QSI005 4.2.1.3.3 PRIMER BATCH: 2-PAINT AS PER DWG AND QSI005 4.2.2.4 PAINT BATCH:

290 - 1-Install FWD and AFT cap seal with sikaflex-241 / 291 B Exp: Start time: Finish time: 2-Coat all exposed hardware with LPS Procyon. Remove any excess off with MEK degreaser. A/R LPS Procyon B

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6028-195	Crosstube Material, 7075-T73/T73511	1 Ea (1 ea)	90-Start up Operation	3017944
D5518-1	Crossbolt Spacer	18 pcs (18 ea)	230-Skid tubes	
D5512-1	Crossbolt Spacer	12 pcs (12 ea)	230-Skid tubes	
AN3C5A	Bolt	6 Ea (6 ea)	290-HandFinish	
D3672-1	Washer, Phenolic	6 pcs (6 ea)	290-HandFinish	
D5483-041	Tow Cap Assembly	1 pcs (1 ea)	290-HandFinish	
D5484-041	Aft Cap Assembly	1 pcs (1 ea)	290-HandFinish	
NAS1149C0332R	Washer	6 Ea (6 ea)	290-HandFinish	

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D6028-195	1	13	0
230-Skidtubes	D5512-1	12	40	0
	D5518-1	18	93	0
290-HandFinish	AN3C5A	6	1,249	0
	D3672-1	6	1,959	0
	D5483-041	1	0	0
	D5484-041	1	0	0
	NAS1149C0332R	6	3,130	0
Part Specifications				
Specifications could not be found.				

Plex 12/31/18 2:11 PM dart.white.jesse

Entered: _____ Date: _____

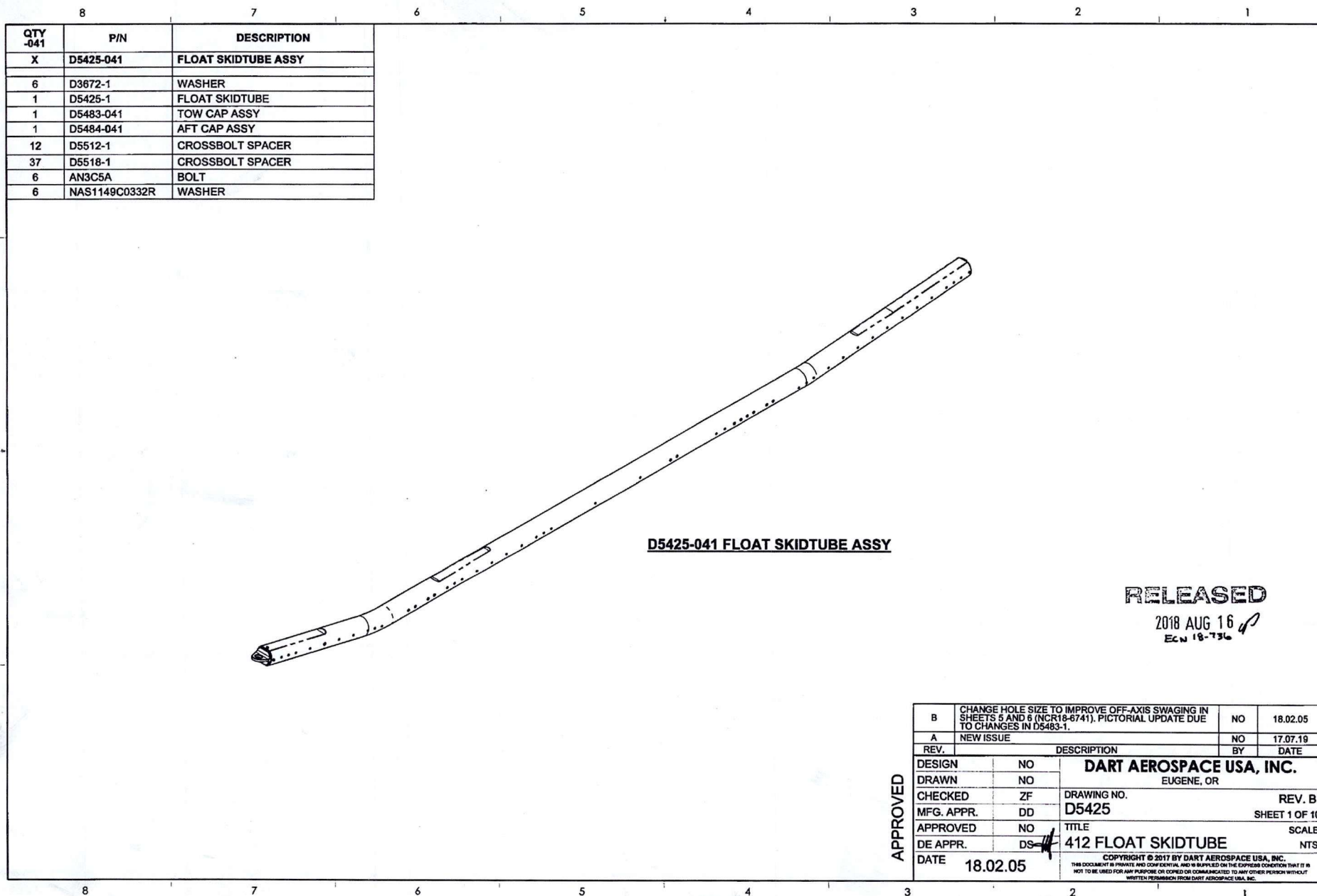


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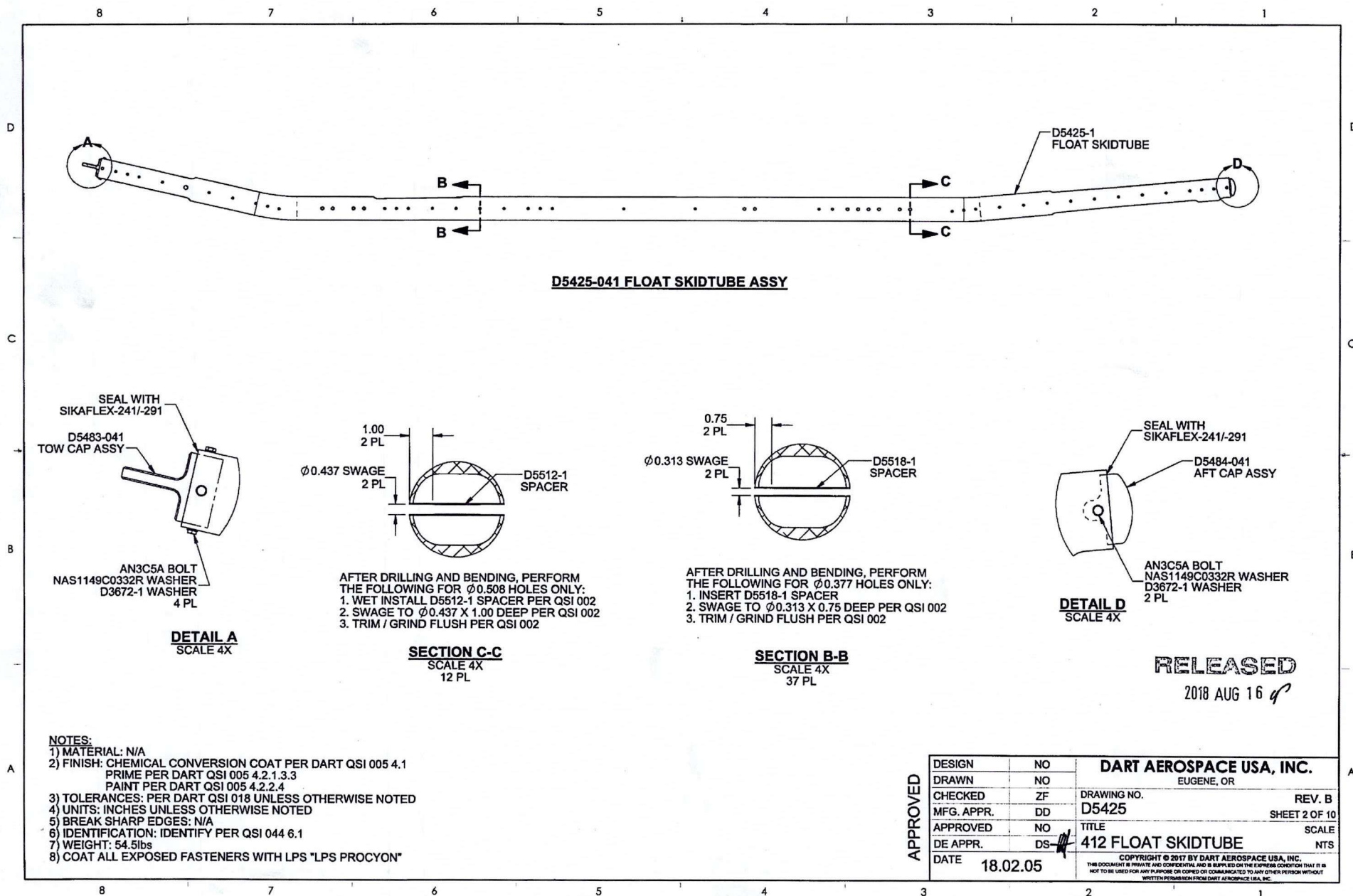


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Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
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Other/Details:					



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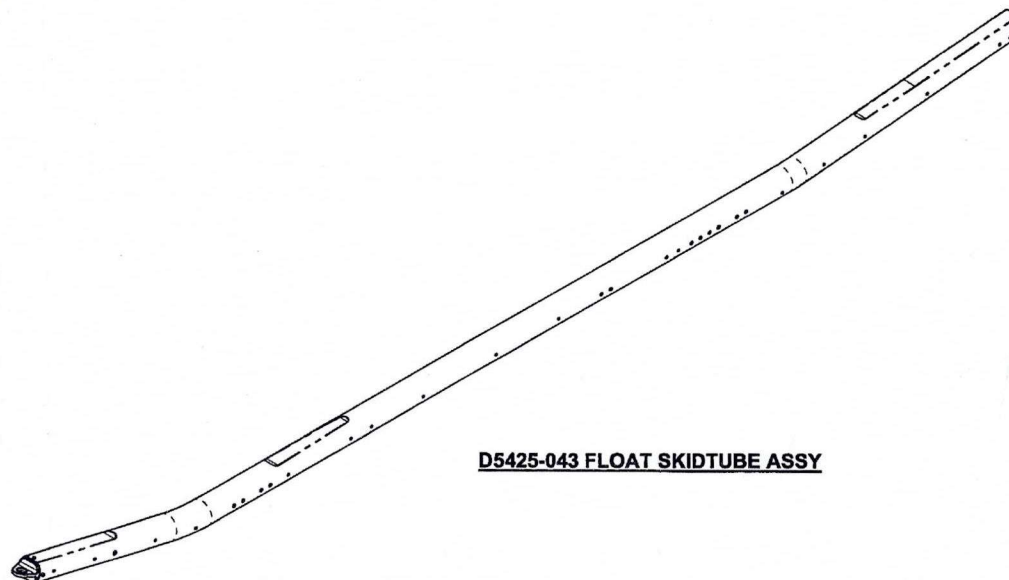
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Other/Details:					

QTY -043	P/N	DESCRIPTION
X	D5425-043	FLOAT SKIDTUBE ASSY
6	D3672-1	WASHER
1	D5425-3	FLOAT SKIDTUBE (DART TRIBAG)
1	D5483-041	TOW CAP ASSY
1	D5484-041	AFT CAP ASSY
12	D5512-1	CROSSBOLT SPACER
18	D5518-1	CROSSBOLT SPACER
6	AN3C5A	BOLT
6	NAS1149C0332R	WASHER



D5425-043 FLOAT SKIDTUBE ASSY

RELEASED

2018 AUG 16 *47*

APPROVED

DESIGN	NO	DART AEROSPACE USA, INC.	
DRAWN	NO	EUGENE, OR	
CHECKED	ZF	DRAWING NO.	REV. B
MFG. APPR.	DD	D5425	SHEET 3 OF 10
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	412 FLOAT SKIDTUBE	NTS
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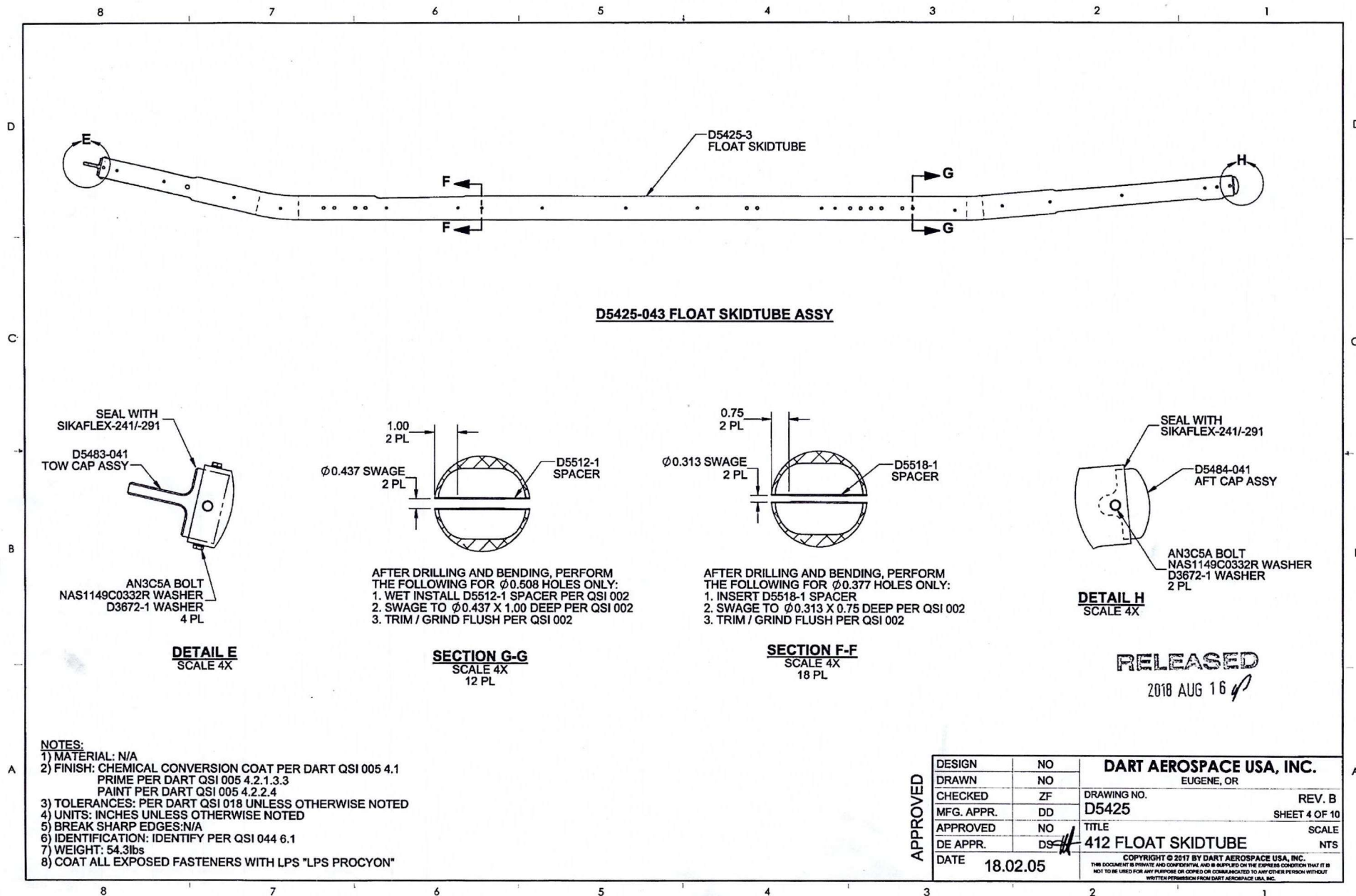


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

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Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
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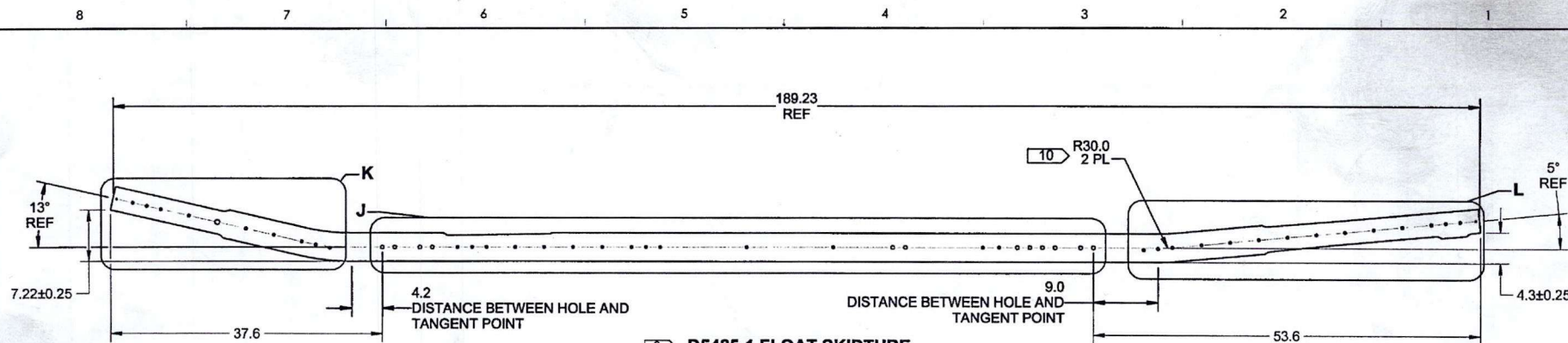


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

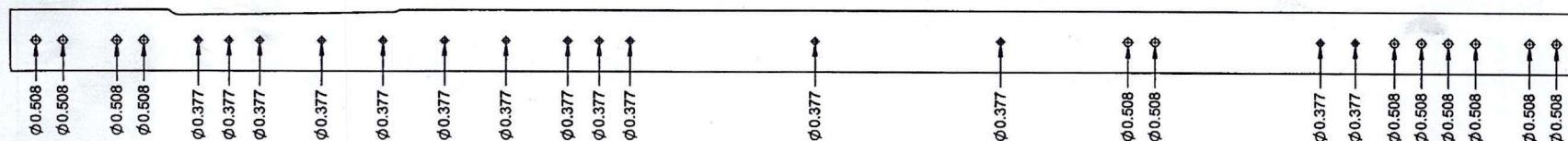
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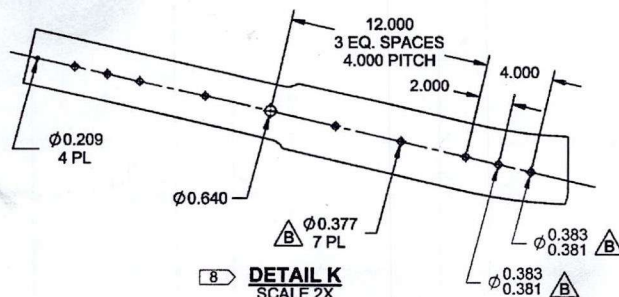
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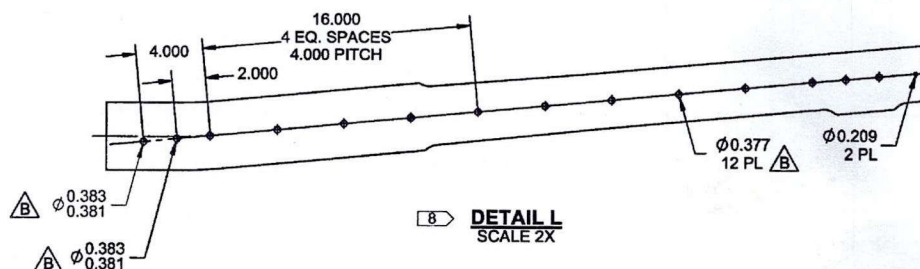
9 D5425-1 FLOAT SKIDTUBE



8 DETAIL J
SCALE 2X



8 DETAIL K
SCALE 2X



8 DETAIL L
SCALE 2X

NOTES:

- 1) MATERIAL: MAKE FROM D5425-1DRILL
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 52.57 lbs
- 8) ALL CENTERLINE HOLES THRU, BOTH SIDES AND ALIGNED WITHIN 0.010
- 9) MAXIMUM TWIST ALLOWANCE 3° BETWEEN FWD AND AFT BEND, 3° FROM EXTRUSION CENTERLINE AT ANY POINT
- 10) MAXIMUM 5% CRUSHING PER QSI 038 7.1

RELEASED

2018 AUG 16

APPROVED

DESIGN	NO	DART AEROSPACE USA, INC.	
DRAWN	NO	EUGENE, OR	
CHECKED	ZF	DRAWING NO.	REV. B
MFG. APPR.	DD	D5425	SHEET 5 OF 10
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DE APPR.	DS	412 FLOAT SKIDTUBE	NTS
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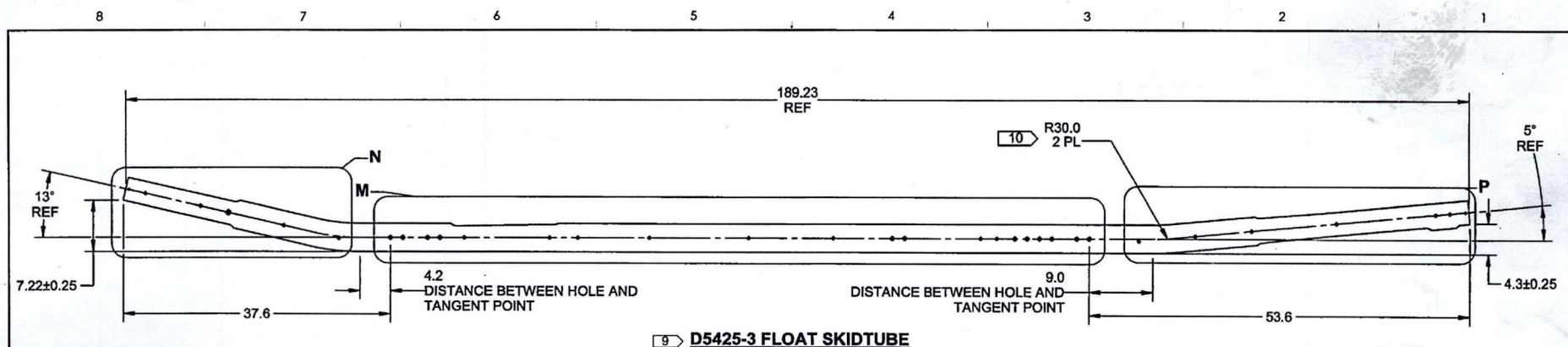


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

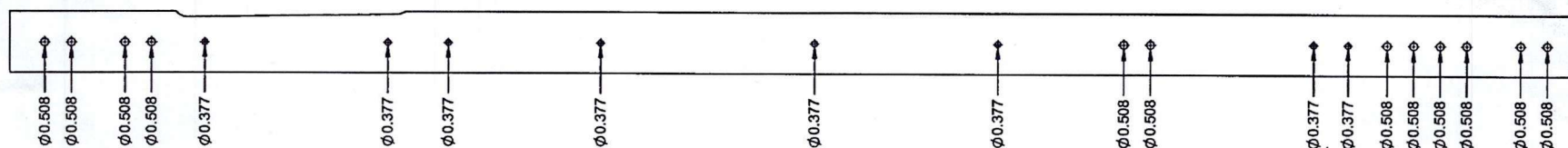
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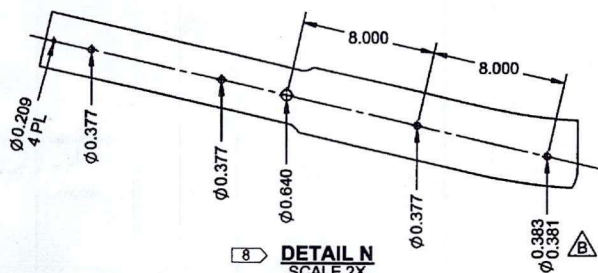
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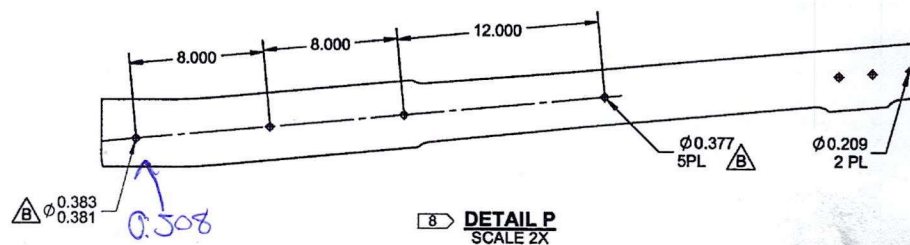
9 D5425-3 FLOAT SKIDTUBE



8 DETAIL M
SCALE 2X



8 DETAIL N
SCALE 2X



8 DETAIL P
SCALE 2X

NOTES:

- 1) MATERIAL: MAKE FROM D5425-3DRILL
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 52.57 lbs
- 8) ALL HOLES THRU, BOTH SIDES AND ALIGNED WITHIN 0.010
- 9) MAXIMUM TWIST ALLOWANCE 3° BETWEEN FWD AND AFT BEND, 3° FROM EXTRUSION CENTERLINE AT ANY POINT
- 10) MAXIMUM 5% CRUSHING PER QSI 038 7.1

RELEASED

2018 AUG 16

APPROVED

DESIGN	NO	DART AEROSPACE USA, INC.	
DRAWN	NO	EUGENE, OR	
CHECKED	ZF	DRAWING NO.	REV. B
MFG. APPR.	DD	D5425	SHEET 8 OF 10
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	412 FLOAT SKIDTUBE	NTS
DATE	18.02.05	COPYRIGHT © 2017 BY DART AEROSPACE USA, INC.	
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Entered: _____ Date: _____

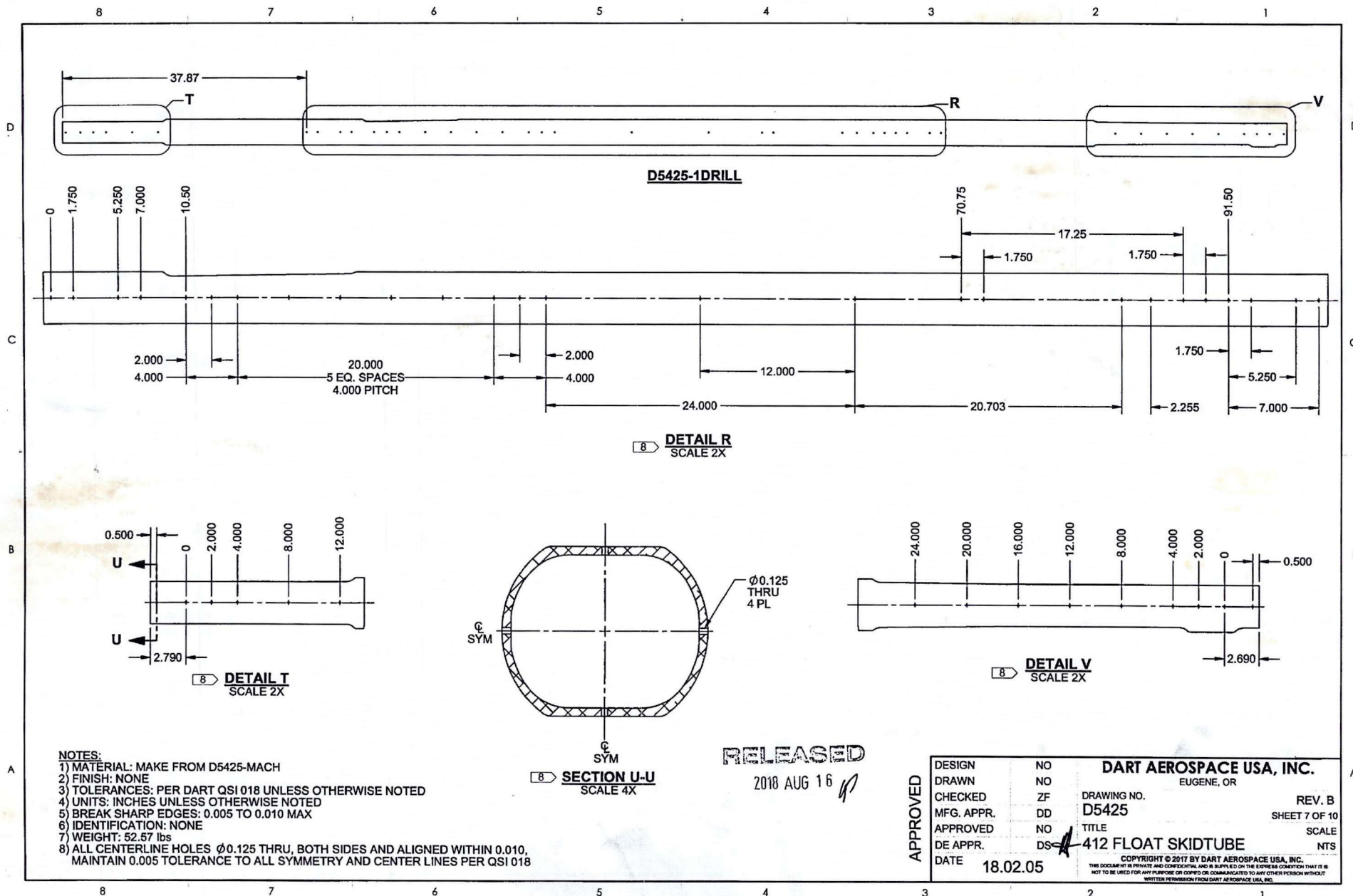


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details: _____					



Entered: _____ Date: _____

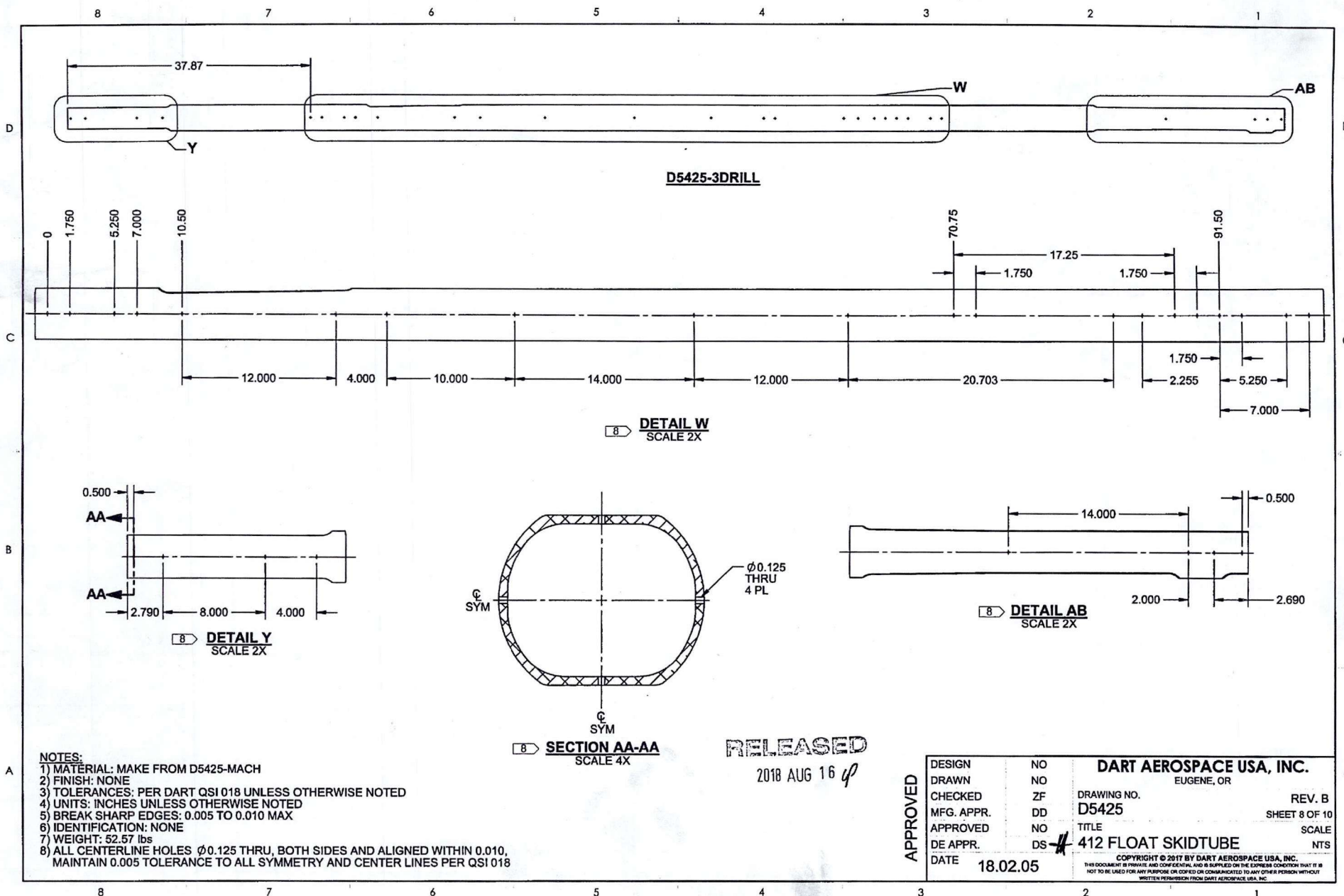


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



Entered: _____ Date: _____

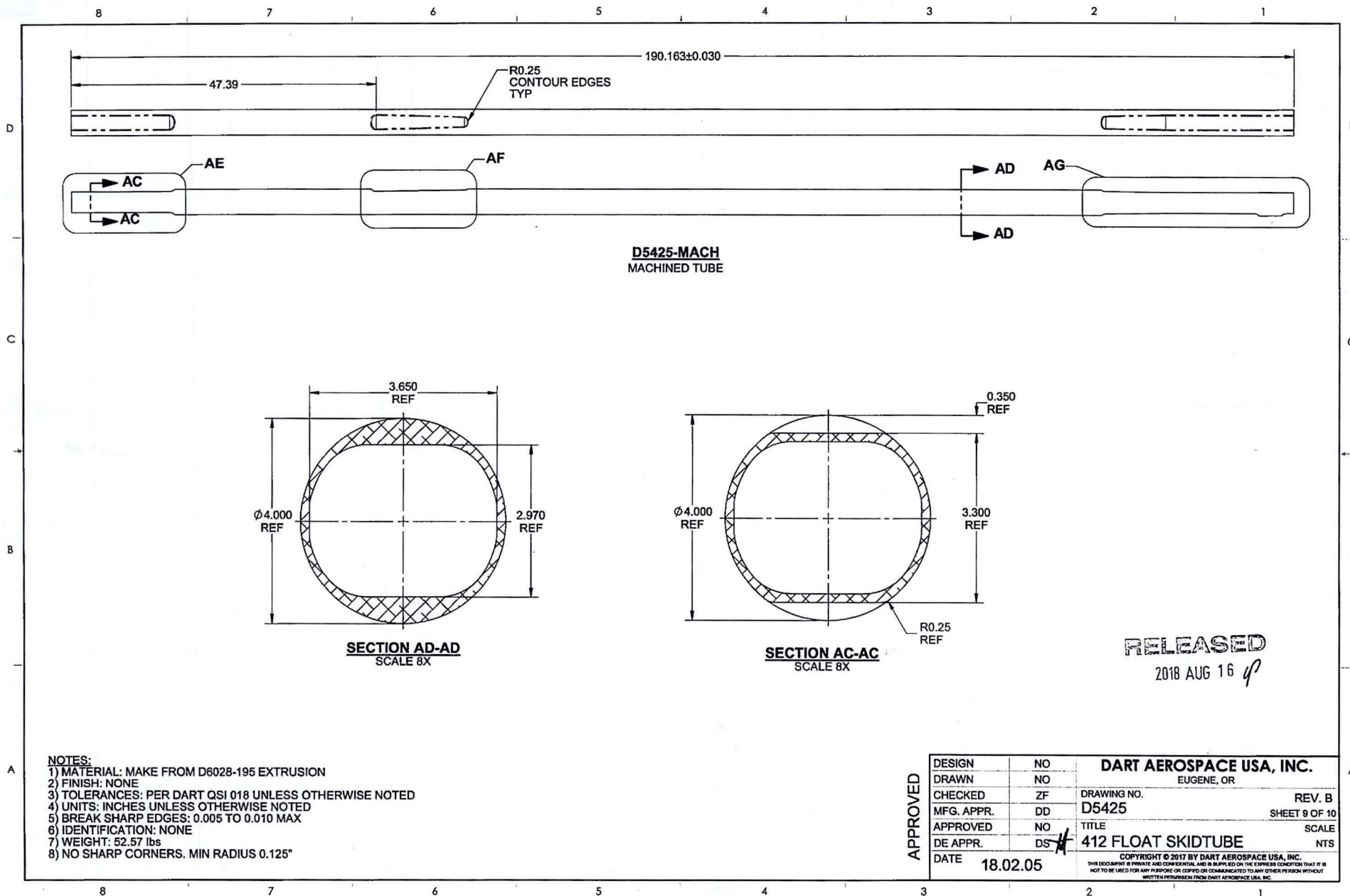


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



Entered: _____ Date: _____



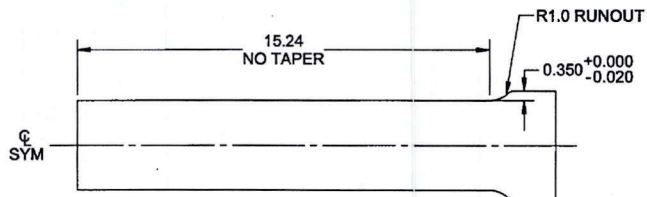
WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

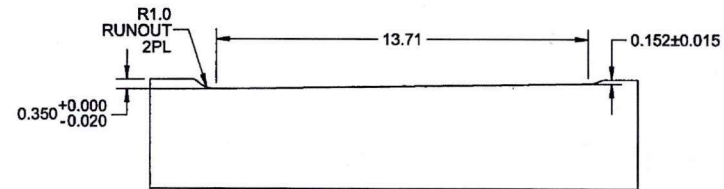
Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QS1042)	
Description Work Order Deviation		Disposition			Completed By
					Lead hand / Supervisor
					QC / QA Coordinator
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

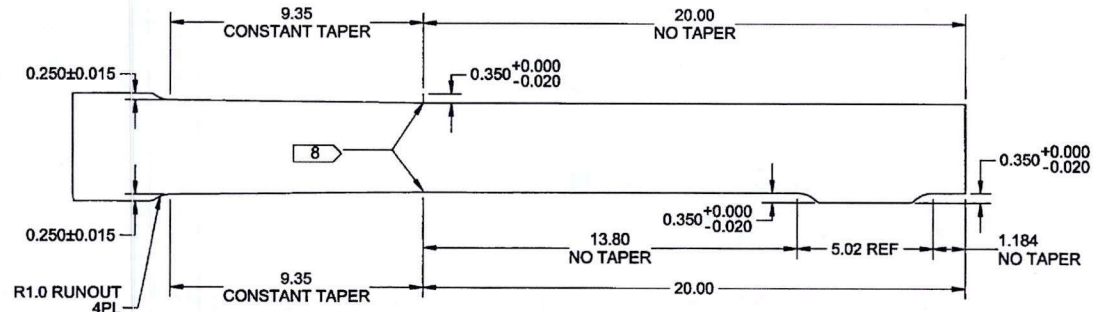
8 7 6 5 4 3 2 1



DETAIL AE
SCALE 3X



DETAIL AF
SCALE 3X



DETAIL AG
SCALE 3X

RELEASED
2018 AUG 16 4P

APPROVED	DESIGN	NO	DART AEROSPACE USA, INC.	
	DRAWN	NO	EUGENE, OR	
	CHECKED	ZF	DRAWING NO.	REV. B
	MFG. APPR.	DD	D5425	SHEET 10 OF 10
	APPROVED	NO	TITLE	SCALE
	DE APPR.	DSS	412 FLOAT SKIDTUBE	NTS
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8 7 6 5 4 3 2 1

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☒ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier Quality ☐		
Date : _____	Sequence #: _____	QTY Affected : <u>1</u>	MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By 19-05-15 Lead hand / Supervisor 19-05-15 QC / QA Coordinator DAS 68 9-89 MAY 16 2019
Ø 0.381 - 0.383 hole drilled to Ø.508		No possibility of using custom crossbolt spacer at this location		
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☒		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☒ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread		
		Other/Details: _____		

